



Water Quality Technical Forum Report

Chlorine Residual & Coliform Data from September 2005

There were no positive coliform samples in purveyor areas during September 2005. Average chlorine residual concentrations in the purveyor distribution systems ranged from 0.2 to 1.0 mg/L, with an overall average of 0.65 mg/L. The target chlorine residual at the Tolt Treatment facility is 1.5 mg/L and the Cedar target residual is 1.4 mg/L. The average chlorine residual for Cedar areas has decreased since August due to an algae bloom in Lake Youngs, but the average chlorine residual for the Tolt areas has increased. As temperatures decrease we expect the chlorine residuals to improve. It has been a very good year so far for distribution system bacteriological water quality. There have been only two positive coliform samples in the wholesale customer's services areas combined, and only six positive coliform samples in Seattle.

Taste and Odor

The taste and odor panel is meeting every other week. Samples are rated on a scale from 1 to 9, with 1 representing the best and 9 representing the worst. The taste and odor flavor rating assessment (FRA) for the Cedar supply (Lake Youngs treated) samples in September were 1.4 and 1.7, and they were described as slightly chlorinous. These are excellent readings considering we have had a fall algae bloom occurring in Lake Youngs since late September. This algae bloom may have caused filter clogging calls for Cedar customers. The two Tolt supply results were 1.0 and 1.3 with a



Water Supply Outlook

Fall season is here and our water supply situation and outlook are good. Over the last 7 days approximately 1.3 inches of precipitation were measured in the Cedar watershed, and 1.5 inches in the Tolt. In response to the recent rains, reservoir inflows have risen and water storage levels in our mountain reservoirs are good.

Regulated streamflows in both the S.F. Tolt and Cedar rivers downstream of our reservoirs are being held above guaranteed normal levels for this time of the year. Chester Morse Lake is at elevation 1549.8 feet, down approximately 0.5 feet from last week, and about 3.9 feet above its long-term average (based on the years 1989 to 2004). The South Fork Tolt Reservoir is at elevation 1738.1 feet, up about 0.9 feet from last week, and 4.3 feet below its long-term average. Water consumption for the 7-day period last week averaged approximately 119 mgd. That is greater than the 114 mgd consumed during the same period last year, and less than the average of 133 mgd used during the same period over the years 1994-2000. To learn more about saving water, please visit www.savingwater.org.

chlorinous taste. If you would like to receive a weekly update of the taste and odor panel results, please e-mail Moya Joubert at moya.joubert@seattle.gov.

Lead and Copper

As of October 25th, all but two samples have been submitted, and 394 samples have been analyzed. There have been only 11 samples that have exceeded the lead action level, 2 in Seattle, 5 in Bellevue, and 4 in the Tolt purveyor area. It looks like each of the four regions will meet the action level again. We are waiting to hear back from the state regarding next year's sampling round, but we should all be going to reduced monitoring. At this time, we don't know which months we will be required to take samples in 2006.

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Conservation Technical Forum

On the web at <http://www.savingwater.org>

Water Smart Technology Efficient Toilets Program

The marketing of the enhanced Water Smart Technology Program for efficient toilets is in full swing. An article appeared in the Resource Venture newsletter "Solutions" and direct mail is occurring to small businesses selected from a database of sprayhead program participants and small business responders from a previous direct mail initiative. Calls for information and applications have been on the increase. Customer recruiting will continue in order to help reach a goal of 1,000 or more new efficient commercial toilets installed in 2005. The largest project approved for installation to date is the Sea-Tac Marriott Hotel in the Highline Water District. This installation calls for 460 new toilets.

New Vacuum Pump Technology

New technology in vacuum pumps used in dentist's offices is allowing the Saving Water

Partnership (SWP) to offer replacement incentives to dentists. This new technology will do away with the old water ring vacuum pumps, which waste thousands of gallons of water per day. Replacing it will be new air vacuum pumps. This program is good for dentists in wholesale customer areas because their water bills usually aren't part of their lease agreement with building management.

RESIDENTIAL INDOOR

Multi-Family Toilet Program

The Multi-Family Toilet program has been extended to December 31, 2005. To date this year, 3,108 toilets have been replaced through out the SWP region.

WashWise

In order to evaluate the effectiveness of the WashWise resource-efficient clothes washer rebate program, we ask customers to fill out a survey form. We received about 360 surveys (36% response rate). When asked, how did you hear about the WashWise rebate program? 61% responded, via retailer. Knowing this information will help us direct our advertising dollars. The results of this survey will be used for promoting and improving the program.

Pilot Showerhead Replacement

In the spring of 2005 SWP launched a pilot Showerhead and Aerator replacement program in the Highline Water District (HWD). We sent, via direct mail, brochures offering 13,000 HWD customers these new heads at no additional cost and explaining the potential water and energy savings of these new fixtures for their families. These showerheads are super-efficient, and go beyond current plumbing codes, effectively saving more water than code showerheads would. The purpose of the pilot was to test customer acceptance, savings, and evaluate distribution techniques.

The response was tremendous. Customers were very happy with the new below code showerheads and aerators. We are currently conducting the

evaluation portion of the program. Staff is interviewing participants and non-participants of the program. The customer participation evaluation of the pilot will be complete by year's end. The evaluation of water savings will take place in the spring of 2006. Following the evaluation, a decision will be made on whether to enlarge the pilot program to include all SWP utilities.

RESIDENTIAL LANDSCAPE

Evaluation postcards were sent to those who had received one or more Guides via the Natural Lawn & Garden Hotline. The overwhelming majority of responses showed that the information from the various guides were found to be very or somewhat helpful, and led to changing garden practices. The top 5 gardening practices that were affected include: mulching and composting; plant selection; water use efficiency; natural lawn care; and pesticide reduction.



Northwest Natural Yard Days Program

SWP contributed to the regional Northwest Natural Yard Days program that ran through September. This promotion takes place twice a year in spring and fall, with over 24 retailers at 48 locations participating in the program. The key message for fall has been to promote greater use of natural products in lawn and garden applications. Retailers provided discounts on compost, organic fertilizer, and woodchips.

Fall Gardening Classes

To promote, and inspire gardeners, classes were hosted at nurseries. Around 300 participated in 8 classes held at nurseries around the region and a private garden in Shoreline. The largest class, with over 90 people, was at Swanson's Nursery, entitled "Goodbye lawn...hello garden." A postcard focusing on fall messages (planting, NWNYP's

discounts and classes) was sent to SWP customers who have attended previous classes hosted by SWP. Staff asked wholesale customer's for additional names if they knew of gardening customers in their areas. More nurseries seem to be offering classes such as natural lawn care that focus on using less water, chemicals and fertilizers than just 5 years ago.

Fall is for planting

Fall is an especially good time to plant, allowing plants a jump-start in growing stronger roots before next summer's dry months. While fall plants will still need water next summer they will be further along toward establishment and drought tolerance than spring planted trees, shrubs and groundcovers. To promote this message and inspire gardeners, classes will be hosted at nurseries that can accommodate at least 30 attendees. Displays at the nursery will showcase Choosing the Right Plants, The Plant List and Growing Healthy Soil along with products from the nursery (compost, fertilizer and plants). So far, City People's, Furney's, Molbak's and Swanson's have signed up to host these classes.

To learn more about conservation, please visit www.savingwater.org.



Asset Management

Water Main Flushing Program

The Asset Management Committee (AMC) heard a briefing about the department's water main flushing program. The objective of the briefing was to:

- present current operational practices and performance data regarding SPU's water main flushing program.
- discuss SPU's Unidirectional Flushing (UDF) pilot program currently under way, which will provide operational and performance data on this alternative method of flushing that is considered to be more effective at removing accumulated material and thereby reducing

customer complaints and improve Total Coliform Rule compliance (chlorine residual maintenance and total coliform %).

- identify possible water main flushing program options to consider in late 2006 when this pilot program is completed.

The AMC approved the staff recommendation including:

- That the water main flushing pilot program continues in 2005 and 2006 utilizing the O&M dollars already allocated to the program.
- The 2007/2008 biennial budget for water main flushing will be refined using data acquired upon completion of water main flushing in 2005.

- The data collected during this 2-year pilot period (2005 & 2006) would be used to develop an average cost to flush per mile of water main utilizing conventional flushing and unidirectional flushing procedures. The cost to flush per mile of water main can be used to develop future water main flushing budgets (2008 and beyond).
- The data will also allow Field Operations Branch staff to better define the benefits of water main flushing specific to SPU's water distribution system. Field Operations would then be prepared to return to the AMC in late 2006 with a business case incorporating a complete cost/benefit analysis of 2 to 3 water main flushing options similar to a CIP PDP #2.



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